CALFED Bay-Delta Program Project Information Form

Watershed Program - Full Proposal Cover Sheet

Attach to the cover of full proposal. All applicants must fill out this Information Form for their proposal. Failure to answer these questions and include them with the application will result in the application being considered nonresponsive and not considered for funding.

1. Full Proposal Title:_**Capay Valley Watershed Improvement Program**_____
Concept Proposal Title/Number:_**same/WSP01-0140**_____
Applicant:__**Yolo County Resource Conservation District**_____
Applicant Name:__**Paul Robins**_____
Applicant Mailing Address:__**221 W. Court St., Suite 1 Woodland, CA 95695**_____
Applicant Telephone: **530 662 2037 x3** Fax: **530 662 4876** Email: **robins@yolorcd.ca.gov**
Fiscal Agent Name (if different from above):_**same**_____
Fiscal Agent Mailing Address:_____
Fiscal Agent Telephone:_____ Fiscal Agent Fax:_____ Fiscal Agent Email:_____

2. Type of Project: Indicate the primary topic for which you are applying (check only one)

_____Assessment	_____Monitoring
_____Capacity Building	__X__Outreach
_____Education	_____Planning
_____Implementation	_____Research

3. Type of Applicant:

_____Academic Institution/University	_____Non-Profit
_____Federal Agency	_____Private party
_____Joint Venture	_____State Agency
__X__Local Government	_____Tribe or Tribal Government

4. Location (including County):

What major watershed is the project primarily located in:
- _____Klamath River (Coast and Cascade Ranges)
- __X__Sacramento River (Coast, Cascade and Sierra Ranges)
- _____San Joaquin River (Coast and Sierra Ranges)
- _____Bay-Delta (Coast and Sierra Ranges)
- _____Southern CA (Coast and Sierra Ranges)
- _____Tulare Basin (Coast, Sierra and Tehachapi Ranges)

5. Amount of funding requested: $_**647,122**_____
Cost share/in-kind partners? __X__Yes _____No
Identify partners and amount contributed by each:

Landowners *$ 60,000*
Yolo County RCD **$ 18,162**
NRCS **$227,020**
County of Yolo **$146,000**

6. Have you received funding from CALFED before? __X__Yes ____No

If yes, identify project title and source of funds:

Union School Slough Watershed Improvement Program, CALFED ERP 1998

Yolo Resource Management Monitoring and Extension, CALFED WUE Pilot 2000

Willow Slough Watershed Rangeland Stewardship Program, CALFED ERP 2001 (in contract phase)

Sustaining Agriculture and Wildlife Beyond the Riparian Corridor, CALFED ERP 2001 (in contract phase)

By signing below, the applicant declares the following:

1. The truthfulness of all representations in their proposal
2. The individual signing this form is entitled to submit the application on behalf of the applicant (if the applicant is an entity or an organization)
3. The person submitting the application has read and understood the conflict of interest and confidentiality discussion in the Watershed Program Proposal Solicitation Package and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent provided in the Proposal Solicitation Package.

_Paul Robins_____

Printed name of applicant

_____

Signature of applicant

1. Executive Summary

Background
The Capay Valley subwatershed of Cache Creek in Yolo County, California consists of roughly 60,000 acres with 24 miles of meandering river in a relatively narrow valley bounded on the east and west by 1500 to 2500-foot ridges. The fertile bottomlands host irrigated field, row and orchard crops, while the upland grassland, chaparral and oak woodlands are managed principally as rangeland. The upstream watershed's history of gold and mercury mining has left a legacy of high mercury levels in the creek. Upstream management practices as well as natural fluvial processes have also contributed to high sediment loads traveling downstream. Other issues of concern include invasive noxious plants in the stream corridor and excessive streambank erosion and subsequent loss of valuable agricultural land within the Capay Valley. Such erosion has caused the loss of orchards, cropland and rangeland, relocation of homes and other structures, degraded water quality and ecosystem health, and increased sediment loads in Cache Creek, the Sacramento River and the Bay-Delta.

The goals of the CVWIP are: 1. Educate landowners and support watershed stewardship through on the ground demonstration and education projects and coordination within the Cache Creek and greater Bay-Delta Watersheds, 2. Facilitation of landowner conservation efforts through technical support, identification of financial resources, and the pursuit of a streamlined permitting program, 3. Development of a Comprehensive Watershed Management Plan to direct and facilitate long-term conservation efforts in the watershed. This proposal focuses on the first two goals as we feel they will provide the understanding and information needed to complete a Comprehensive Watershed Management Plan for Capay Valley that can be successfully implemented by landowners. The RCD is actively seeking funding for the CWMP.

The Cache Creek Watershed Stakeholders Group (CCWSG) was formed in late 1996 to address various resource concerns in the entire Cache Creek Watershed. While the CCWSG has narrowed its focus to Capay Valley, it is committed to collaboration and coordination with neighboring and partner regional and watershed groups (see Section 8 for more detail). Through a grant from the California Department of Conservation (DOC), the Yolo County RCD was able to hire a full-time watershed coordinator for the Stakeholders Group in April 2001. The watershed coordinator is now working with the CCWSG to complete an "Integrated Resource Management Manual" (Manual) for the watershed by August 2001, develop the CWMP (under separate funding) with Jones & Stokes Associates, implement projects, educate landowners and land managers, and coordinate the efforts of the CCWSG with those of other groups within the entire Cache Creek and larger Sacramento River and Bay-Delta watersheds. At this time the pieces are in place to move forward towards the goal of more cohesive stewardship of the resources and ecosystem values within the entire Cache Creek watershed; this proposal is the next logical step in this process. Capay Valley Vision (CVV) and the Cache Creek Conservancy (CCC) are similarly submitting complementary proposals to the CALFED Watershed Program to further community cohesiveness in support of watershed health and noxious weed eradication programs, respectively. We anticipate regular collaboration with them in the pursuit of overall watershed stewardship (see Section 8 for more information).

Underlying Assumptions
The Yolo County RCD and the CCWSG realize that the success of the Cache Creek watershed management effort is dependent upon the involvement of stakeholders (landowners, farmers, ranchers, residents) within the watershed and collaboration with local, state and federal agencies. Stakeholder understanding of watershed functions and methods for improving watershed health are crucial to the success of efforts in Cache Creek. Unfortunately, thinking at a watershed level is not necessarily automatic for landowners. The RCD has found that the most effective approach to landowners' watershed education is through demonstration and education using demonstration site projects, field meetings, and informal information networks ("over the fence" observation and roadside and coffee shop conversation). Regular stakeholder group meetings provide opportunities for community sharing, venting, and recognition of shared goals. This proposal is based on four underlying assumptions: 1) Small scale, voluntary, landowner-by-landowner conservation actions are the building blocks of watershed stewardship; 2) On the ground watershed restoration and improvement projects need to be locally-driven and coordinated, and linked to and supported by organizations from the watershed level to that of federal and regional resource agencies, 3) Watershed restoration and improvement efforts need to be monitored to provide the necessary feedback for informed adaptive management decisions to be made, 4) The permitting process should not be an obstacle to those whose efforts are intended to improve watershed health.

Project Methods
In addition to project administration and reporting (see budget tasks 1 and 5, respectively), this proposal includes three primary tasks: *Task 2* - Plan and implement hands-on demonstration projects in the watershed, and create a framework or program to support landowner permitting for implementing projects (this includes coordination with an environmental consulting firm in development of a CWMP to facilitate the latter); *Task 3* - Maintain and monitor the project sites for

successful establishment, effectiveness, and watershed health benefits for use in outreach and adaptive management; *Task 4* - Communicate project techniques and results within and beyond the watershed through an outreach program of field meetings, press coverage and publications, regular Stakeholder Group meetings, and coordination between various watershed groups and their programs and ecosystem restoration/improvement efforts. Each task is described in further detail below.

Task 1: Project Administration (see Section 3 and Budget Spreadsheets)

Task 2: Watershed Conservation Demonstration Projects, Plan Development and Permitting
The Watershed Coordinator and Restoration Specialist (project staff) will coordinate and implement a range of projects that demonstrate the need and potential for watershed improvement in three major land resource categories: rangeland, lowland agriculture, and streamside riparian areas. The Integrated Resource Management Manual will provide the techniques to be employed on the demonstration sites. Through the demonstration projects, landowners and land managers will gain a better understanding of the techniques presented in the Manual and the importance of improving water quality and ecosystem health. Project staff will pursue additional funding through landowner support programs such as NRCS EQIP cost-share, the USFWS Partners for Fish and Wildlife, and California Wildlife Conservation Board Programs to augment these projects and develop other new demonstration sites. All projects will take place on sites that have willing landowners and compelling resource concerns. The projects are described below by land use category.

Task 2.1 Rangeland: Demonstration projects on rangeland will include at two stock pond fencing and revegetation sites (with appropriate pumping, piping, and storage of stock water away from the pond) and 0.25 miles of degraded stream corridor (minimum 100 feet wide) fenced and revegetated to be managed as riparian pasture, and one mile of proper rangeland road construction (including outsloping, rolling dips and proper culvert design and installation). These upland and riparian management techniques have demonstrated effectiveness elsewhere in improving water quality and wildlife habitat and reducing local erosion.
Task 2.2 Lowland Agriculture: Demonstration projects on lowland agricultural sites will include at least three sediment traps where ditches drain into streams, five acres of vegetated filter strips at the low ends of orchards, and 100 acres (either one field or several) of winter cover crop demonstrated on annual crop fields. All of these practices are intended to limit sediment and other contaminant movement and/or runoff from agricultural production fields to local waterways.
Task 2.3 Streamside/Riparian Areas: Two demonstration projects on streamside and riparian areas will feature streambank stabilization techniques using native plant material and quarried rock, bioengineering techniques (i.e. willow mattresses with rock toe protection, brush layering with rock toe protection and baffles), and include the removal of noxious plants such as Giant reed and Tamarisk.
The demonstration projects will serve as hands-on training courses for landowners and land managers (as well as agency personnel) to gain first hand knowledge of what is required to implement the techniques in the Manual. Additionally, project feedback will provide information needed for the creation of the Comprehensive Watershed Management Plan for Capay Valley.

Task 2.4: Project staff will work with the appropriate agencies, including the California Department of Fish and Game (CDFG), U.S. Fish and Wildlife Service (USFWS), State Water Resources Control Board (SWRCB), Regional Water Quality Control Board (RWQCB) and the Army Corps of Engineers (ACOE), to develop a program or framework that will streamline the permitting process for landowners, watershed groups, and agencies that seek to implement projects for improvement of watershed health. Watershed groups and landowners are often disillusioned by the slow paced, tedious and technical permitting process that was developed for the development and construction industry. Project staff will establish a collaborative partnership between the Stakeholders Group and permitting agencies to support stakeholder initiation of watershed restoration and improvement projects.

Task 3: Project Monitoring
Project staff will conduct initial monitoring on candidate project sites to establish baseline data. Project staff will work with participating landowners to conduct ongoing monitoring and maintenance of the above-mentioned demonstration sites. Willing landowners and land managers will be encouraged and trained in appropriate monitoring and maintenance techniques for assessing project establishment and success as well as measurement of project benefits (sediment capture, weed suppression, etc.). Monitoring techniques will include: “benchmark” surveys, photomonitoring, vegetation cover estimation, water volume estimations and water quality sampling. Monitoring will provide landowners/managers with the appropriate information to employ an adaptive management strategy to future projects. This will ensure that unsuccessful techniques are not repeated and the most cost-effective and successful techniques are continued. Resulting data will also be used to augment RCD efforts to quantify conservation practice benefits for the project as well as for potential regulatory and funding agency requirements.

Task 4: Outreach and Watershed Coordination
Task 4.1: Project staff will lead a local outreach program featuring project sites and coordinated with other RCD outreach efforts in Yolo County. This will consist of at least four field meetings per year (two within Capay Valley), bi-monthly stakeholder group and stakeholder group steering committee meetings, and publication and press coverage of project activities and results. It will be important to inform the stakeholders within the Cache Creek watershed as well as others doing similar watershed work elsewhere of the successes and failures of the projects implemented as part of this proposal. Conversely, project staff will bring information from outside the Cache Creek watershed to the CCWSG and field meetings. Most private landowners need to see that a technique has been implemented successfully elsewhere before implementing it on their own land. Field meetings will provide an opportunity for landowners/managers to see first hand the results of watershed restoration/improvement efforts and provide a sense of scale and context that pictures, descriptions, and engineering drawings cannot provide.

Task 4.2: The Watershed Coordinator (WC) will stay apprised of all watershed activities and will identify and promote opportunities for collaboration among the various Cache Creek watershed groups. It is important that funding for watershed work be used efficiently and that groups seeking to improve their watershed are able to secure funding. The WC will provide technical assistance to watershed groups looking to implement projects or programs. The WC will attend watershed group meetings, organize field meetings and maintain a contact list and database of watershed groups and projects. The WC will stay apprised of activities and coordinate with watershed groups working in the greater Sacramento River watershed and CALFED's Bay-Delta Program.
The expected outcome of this task is a coordinated watershed management effort for the entire Cache Creek Watershed and participation in and contribution to the greater Sacramento River and Bay Delta Watersheds. Projects will be locally driven, but will use techniques and protocols that are proven and accepted throughout the watershed and that are part of a larger organized effort, such as CALFED. Collaboration will help insure the most efficient use of money and resources.

Task 5: Reporting (see Section 3 and Budget Spreadsheets)

An approximate timeline for project activities is included below:

Activity	**Timing**
Choose demonstration sites	Winter 2002 – Summer 2002
Develop permitting program	Winter 2002 – Spring 2003
Develop project plans/programs/protocols	Spring 2002 – Spring 2003
Apply for permits, plan modifications	Spring 2002 – Fall 2003
Demonstration project implementation	Fall 2002 – Summer 2004
Monitoring	Summer 2002 - Fall 2004
Outreach (Field meetings and educational material production)	Winter 2002 – Winter 2005
Stakeholder Group & Watershed Groups Coordination	Winter 2002 – Winter 2005
Reporting & project administration	Winter 2002 – Winter 2005

2. Qualifications & Readiness

2a. The Yolo County RCD will serve as fiscal agent for the funding requested. The RCD has successfully administered a growing budget (increased from $200,000 to $500,000 of annual grant funding since 1995) to successfully complete several exemplary demonstration, planning, education, and monitoring programs in Yolo County. The County of Yolo provides general accounting services for the RCD. Based on this experience and structure, we are confident that we can manage the proposed funding (approx. $200,000 per year) and conduct the work described in this proposal. Additionally, continued funding for the nearby Union School Slough Watershed Program from the CALFED Ecosystem Restoration Program (ERP) will enhance the RCD's general technical and outreach capabilities (through new staff to be hired) that can support this proposal through mutual support and collaboration.

2b. The RCD has ample technical resources available to successfully implement the proposed work. The Cache Creek Watershed Stakeholders Group (CCWSG) has the involvement of a Technical Advisory Committee (TAC) that will form the hub of a TAC for the proposed work. The RCD itself has staff experienced in watershed planning and facilitation, restoration, monitoring and outreach programs that will provide expertise for the proposed work. Audubon California staff, as partners

with the RCD on the nearby Union School Slough Watershed Improvement Program, will provide input and collaboration as well.

Through our long-standing relationship with the USDA Natural Resources Conservation Service (NRCS) and the NRCS Woodland Field Office, we have day-to-day support of a range conservationist, soil conservationist, and the District Conservationist. We have also generated working relationships with staff of the NRCS State Watershed Planning Services, including state geologist Vern Finney and hydrologist Mark Cocke, both of whom have followed and consulted on other RCD projects. Mr. Finney, as a resident of Esparto, near Cache Creek, has a personally vested interest in our activities there and recently undertook a photo-survey of Cache Creek in Capay Valley documenting streambank erosion reconnaissance for NRCS and the CCWSG (Finney, 2000).

Through past projects the RCD has generated a broad support network of technical expertise through agency, organization, and extension personnel. Regulatory agency support with permitting and compliance programs comes from the State Water Resources Control Board Water Quality Division staff (Stefan Lorenzato, Vic DeVlaming, Greg Frantz, Kathleen Groody, and Robin McCraw), the US Fish & Wildlife Service Partners Program staff (Dan Strait), the California Department of Fish & Game (Craig Stowers, Dale Watkins, and Gary Hobgood), and the California Regional Water Quality Control Board staff (Janis Cooke). Through collaborative activities we also have available the technical expertise of several UC Cooperative Extension specialists (Ken Tate, Mel George, Joe DiTomaso) and farm advisors (Gene Miyao, vegetable crops; Rachael Long, field crops and Integrated Pest Management; and the new range and watershed advisor).

2c. Previous related projects implemented by the RCD that demonstrate our capacity include:

- The Total Resource Management Outreach Program—funded 1994-2000 by the US Bureau of Reclamation as part of a statewide program. RCD staff selected five farmer cooperators to implement, monitor and communicate the results of conservation practices on their farms and ranches. Common elements of the project include stream bank revegetation, cover crop evaluation, pond development, water quality and vegetation monitoring, and extensive work with native vegetation establishment for wildlife areas and filter strips.
- The Irrigation Ecosystem and Water Quality Management Program—funded 1995-1998 with Clean Water Act 319(h) funds. Under this program, RCD staff undertook ¼ mile of stream bank reshaping and revegetation, established five tailwater ponds, planted one mile of native grass roadside right-of-way, and vegetated ½ mile of irrigation canal banks on the properties of volunteer private landowners. The project also included an outreach and education program on the native vegetation management techniques for the county road maintenance staff and the local irrigation district staff.
- The Hedgerow Project—funded 1996-1999 by the Department of Pesticide Regulation. In collaboration with the Yolo/Solano County UC IPM Advisor Rachael Long, project staff established five native insectary hedgerows on area farms to evaluate their insectary and wildlife habitat benefits. The project incorporated local schools for planting days; numerous workshops, presentations and articles; and an instructional video on hedgerow design, installation and maintenance.
- The Union School Slough Watershed Improvement Program—ongoing since 1999 with CALFED ERP funding. This is a collaborative effort with the National Audubon Society to implement and evaluate recommendations made in the Willow Slough Watershed Integrated Resources Management Plan (1996) in one sub-watershed of Willow Slough. Recent funding for 2001 from the ERP will extend this program through 2004. Project staff contacted landowners in the watershed and have installed ½ mile of reconstructed and revegetated slough bank, almost 200 acres of native perennial grass rangeland, numerous wildlife and tailwater ponds, and several range pond and riparian fencing and revegetation projects. The structure for that highly successful project serves as a model for the proposed work in the Capay Valley.
- Watershed Coordination—funded 1998-2001 with CWA 319(h) funds. The focus of this project is coordination of the multiple natural resource agencies involved in conservation project permitting to assess and pursue opportunities for streamlined permitting in the Willow Slough and Cache Creek watershed. From this effort the RCD has established relationships with regulatory agency personnel in the region, which help expedite permit processing for the proposed work in the Capay Valley.

3. Project Budget

The attached budget sheets summarize the total costs for the proposed work by category and by task. Project costs were estimated based on prior work performed in the region by the RCD and its partners in the past five years. Brief descriptions of costs per category are described below:

Labor (3 Year total: $347,400):
The Watershed Coordinator and Restoration Specialist will be the project leaders. The RCD Executive Director will provide additional leadership, especially in areas of permit acquisition, project design, grant proposal and contract development, and program outreach. The Program Assistant will support the Watershed Coordinator primarily with outreach event preparation and material development. All salaries (see table) are commensurate with those of other RCDs statewide, per an informal survey by the RCD in the development of its Personnel Manual. Salaries presented below are a three-year average, taking into account annual maximum increases of 5% (2.5% COLA and 2.5% merit). Fringe benefits are calculated at 25% of each individual's pay and include employer contributions to social security, worker's compensation insurance, health care, a modest 401k, and a vacation leave accrual fund.

Position	Rate	Per year (includes benefits)	3 year total (includes benefits)
Watershed Coordinator	$20/hr	$46,250	$138,750
Restoration Specialist	$20/hr	$52,000	$156,000
Executive Director	$27/hr	$14,040	$42,120
Program Assistant	$15/hr	$3,510	$10,530
Totals		$115,800	$347,400

Supplies (3 Year total: $116,393):

Task 1: Computer station, software, and electronic media for project staff, and general office supplies for project administration. Miscellaneous materials for project portion of RCD presentations = $10,000
Task 2: *Rangeland Projects (Total: $45,943):*
Pump and trough assemblies for range ponds: $9,000 each x 2 = $18,000
Stock pond and riparian pasture vegetation:
10 ac. @ $1000/ac. Native grass seed = $10,000
@ 100 trees or shrubs/acre x $3/plant = $3,000
4' tubex for trees @ $3/ea. x 100 = $300
1.5 linear miles @ 5280'/mi. x 1 plug/ft. x $0.40/plug = $3168
Irrigation hoses, emitters, pump, filter, and fittings @ ~$2,000/site = $6,000
Flags, markers and miscellaneous planting and site preparation supplies = $2,000
Gravel for tank and trough pads: 2 sites @ $300/site = $600 + $100 (hauling) = $700
Culverts for Road demonstration: 24"x 40 ft. x 2 sites @ $10/ft = $800 + $100 (delivery) = $900
Rangeland Native Grass Seed Mix for Roadsides: 1.5 acres @ $1,000/acre = $1,500
Straw Mulch for Roadsides: 1.5 acres @ $250/acre = $375

Lowland Agriculture Projects (Total: $18,000):
Drop structures and pipe for sediment traps: 3 sites @ $1000 each = $3,000
Plant materials for filter strips: 5 ac. @ $600/ac. = $3,000
Cover crop seed: 100 ac. @ 60#/ac. @ $2/lb = $12,000

Streamside Projects (Total: $13,200):
Large Rock: 500 yds^3 @ $20/$yd^3$ = $10,000
Riparian Native Grass Seed Mix: 2 sites @ 1 acre each x $600/ac. = $1,200
Wire, stakes & rope: $1,000
Fabric: $1,000
Willow cuttings to be harvested rather than purchased

Misc. small tools and supplies: $2,000.

Task 3: Monitoring supplies such as bottles, coolers, weirs, flowmeters, and water quality analysis kits for demonstration and volunteers = $15,000
Task 4: Paper, display materials, photographic film and development, electronic media for storage, meeting expenses = $12,250
Task 5: Covered under Task 1

Travel (3 Year total: $28,250) :
Task 1: Rental, maintenance, and insurance for truck during project period:

$450/mo. X 36 months	= $16,200
$750/yr. X 3 years	= $2,250
$400/yr. X 3 years	= $1,200
36,000 mi. / 20 mpg x $2/gal	= $3,600
Total	$23,250

Tasks 2-5: Per diem food, lodging, travel and registration expenses for meetings, plus reimbursement for incidental use of personally owned vehicles by project staff for project activities at $0.345/mile (Yolo County standard rate in April 2001) = $5,000

Other Expenses (3 Year total: $27,250):
Task 2: Permit fees as described in Section 7c for two stream project and one riparian fencing project = $6,000
Task 4: Honoraria for presenters ($5,000), room rental ($1000), printing for educational materials ($10,000), printing and postage for field day announcements ($3,000), and food costs for Stakeholders Group and Field meetings ($75/mtg x 30 meetings= $2250). Total = $21,250

Subcontracts (3 Year total: $69,000):
Task 1: Project information mounted on RCD website and maintenance of that page= $1,500
Task 2: Grading for road construction demonstration project, ~$5,000/mile x 1 mile = $5,000
Labor crews for planting and weed control, $5,000
Excavation of sediment traps: 3 traps @ $500/trap = $1,500
Fence building for two stock/wildlife ponds and riparian pasture @ $2/foot (labor ~$0.81/foot + wire, posts, braces, and gates) x 3000' x 3 sites = $18,000
Excavation and material placement on stream projects: $1800/day x 5 days x 2 sites = $18,000
Task 3: Lab costs: 400 samples @ $50/sample/constituent = $20,000

Overhead (3 Year total: $58,829):
Overhead is charged at a standard rate of 10% on all project costs. Overhead costs include the project portion of the annual audit ($1000/year), Executive Director and Administrative Assistant time for general personnel management, accounting, and overall RCD support, rent and utilities, office equipment and maintenance.

Match (3 Year total: $450,640):
Stakeholder Landowners and Agency personnel expertise: 25 person hours/mo. x 3 yrs = 1,000 hrs x $60/hr = $60,000
NRCS Staff Total (3 years) = $222,880:
Vern Finney, Geologist @ 80 hrs. x $80/hr. = $6,400
Phil Hogan, District Conservationist @ 624 hrs. x $60/hr. = $37,440
John Weatherford, Soil Conservationist @ 1248 hrs. x $50/hr. = $62,400
Steve Jaouen, Range Conservationist @ 2496 hrs. x $40/hr. = $ 99,840
Jack Alderson, Engineer@ 240 hrs. x $70/hr. = $16,800
Yolo County Tamarisk Mapping Project: 3 years of aerial photography = $146,000
Watershed Coordinator: 690 hrs. covered under separate funding x $17/hr. x 1.25 = $14,662
Use of NRCS vehicle @ 4000 mi./yr. X $0.345/mi. x 3 years = $4,140
Two field meetings per year funded by RCD = $3,500

Other Anticipated Match (not yet committed):
Farmer and local agency equipment use: Tractor, ATV, bulldozer, and excavator
Cost share and other grants awarded to leverage and extend project funds and activities.

4. Technical Feasibility

4a. As evidenced in Section 2 of this proposal, the Yolo County RCD has successfully implemented and monitored conservation and education projects with activities similar to those proposed here. Through these projects the RCD has broadened the methods and technology at its disposal to successfully implement and demonstrate a variety of conservation

practices in production agriculture and rangeland settings. We are confident our ability to implement the similar projects proposed here in the Cache Creek Watershed.

As part of the Total Resource Management Outreach Program described earlier, the RCD installed native vegetation along Willow Slough, fencing for controlled grazing management and habitat improvement along a stream corridor and surrounding a stock pond, and tailwater and wildlife ponds (including sediment traps to capture silt that would otherwise enter public waterways). In cooperation with UC Cooperative Extension, the RCD also conducted initial studies on winter cover cropping as a means of reducing stormwater runoff, capturing sediment, and improving water quality. Other partners on these projects included the Yolo County Flood Control and Water Conservation District and local California Department of Fish and Game personnel.

Currently, the RCD has two CALFED-funded projects running in the county. The Union School Slough Watershed Improvement Program (CALFED Ecosystem Restoration Program), a cooperative program between the RCD and Audubon-California, is installing fencing and native vegetation along riparian corridors and ponds. The Water Use Efficiency Pilot Program (CALFED Water Use Efficiency Program) is installing sediment traps to control sediment movement into riparian systems and is continuing to investigate the benefits of winter cover crops for sediment and runoff management.

4b. While the RCD has been promoting resource conservation in Yolo County since its formation in the late 1950's (initially as three separate districts that then consolidated in 1977), the District's more intensive conservation support and monitoring activities began approximately ten years ago. In spite of the RCD's expansion of knowledge since that time about use of these farm-friendly conservation techniques, it is still relatively novel (although time-tested) technology, seeing only limited implementation on the modern agricultural landscape throughout the state. While these techniques' benefits are recognized, we still lack robust data on their specific benefits and impacts regarding water quality. Conservation practices will not achieve broad acceptance and promotion (especially by regulatory agencies) until the benefits are well documented, yet previous projects have only allowed for limited monitoring. We have proposed careful monitoring of the on-the-ground demonstration projects proposed here will provide further opportunity to demonstrate and document the specific benefits of these conservation methods and their adaptability in a broad variety of settings. This monitoring will complement that of the recently extended Union School Slough Watershed Improvement Program (CALFED ERP) and will extend that project's data set. In cooperation with the USDA Agricultural Research Service (ARS) and the University of Oregon, RCD staff will use USSWIP and CVWIP monitoring data to develop an on-line conservation planning tool (the Yolo OnePlan) for landowners that will be extendable throughout California and the Bay-Delta Watershed.

The RCD will monitor all projects using standard techniques, adapted during prior projects, to assess establishment, success, and benefits. These will include "benchmark" surveys of current conditions, photo monitoring for the duration, vegetation surveys and cover estimates by category (weeds versus natives) or by species where appropriate, and water quality samples, particularly for sediment. The data accumulated through the monitoring of these projects will quantify the benefits of the conservation practices related to water quality and soil/streambank stability.

4c. Staff time and materials for project maintenance is included in the proposed work plan. Willing landowners will be incorporated into the maintenance and monitoring programs as much as possible to prepare them to continue beyond the project period. Demonstration sites will be selected partly according to expressed commitment of candidate landowner cooperators. The planned conservation practices, such as vegetated filter strips, riparian fencing and revegetation, fenced and planted stock ponds, proper ranch road design, sediment traps, and cover crops, will be designed and implemented using standard farming and ranch management techniques and equipment to allow for long-term management by the landowner. This has been successful in prior project implementation and maintenance. After the two to three-year initial establishment phase that is the scope of this project, riparian plantings should require limited maintenance in the way of spot-spraying of invasive weeds, or removal of re-growth of unwanted species. Grass filter strips or planted ponds will require periodic, well-timed mowing or spot spraying to limit annual grass growth, using standard farming implements or backpack sprayers. Sediment traps can be cleaned as needed, typically once each year, with the spoils returned to the upper end of the field.

5. Monitoring and Adaptive Management

5a. Success Criteria
Stock pond fencing and revegetation:

- Successful installation of continuous fencing around pond
- Successful native plant establishment:

    - At least 60% survival of (plug) planted or potted species
    - At least 25 grass seedlings per square foot, 2-3 months after planting
    - 70% cover of native species by project completion
- Increased wildlife use per surveys
    - Bird surveys: increase in numbers of individuals and/or species richness using point count
    - Mammals: increase in numbers and/or diversity using combination of track stations, track or sign surveys, and/or direct observation by project staff or landowner
- Generally increased vegetation cover on banks
- Increase in total percent cover from baseline to project completion using 1 m^2 quadrats
- Improved water quality in ponds
    - At least 10% improvement in any of the water quality parameters measured

Sediment Traps:
- At least 15% reduction in sediment content of water between entry and exit of sediment trap, based on grab-samples taken during irrigation events and/or storm runoff flow periods

Vegetated filter strips:
- At least 70% cover of filter strip species by project completion
- Visual assessment of soil capture above filter strip, documented through photomonitoring

Cover crops:
- At least 30% runoff reduction and >/= 15% reduction of sediment content of runoff, based on comparison of water samples from adjacent, untreated area

Streambank enhancement & revegetation:
- Successful native plant establishment:
    - At least 60 % survival of (plug) planted or potted species
    - At least 25 grass seedlings per square foot, 2-3 months post planting
    - 70 % cover of native species by project completion
- Structure maintains stability and evidence of successful sediment retention behind traps (if present)
- Visual assessment of soil/sediment capture above project, documented through photomonitoring

The successful achievement of the above goals will serve to confirm the appropriateness of the measures taken for use in Cache Creek Watershed. Failure to achieve them (or the degree of failure) will serve to inform the decision making process of the local landowner/cooperators, the Watershed Coordinator, local officials and decision makers, and ultimately the CALFED process.

Programmatic permit for stream work under CCWSG & RCD
Success of this aspect of the overall project will be measured qualitatively by degree of cooperation with and from the permitting agency/agencies, length of time required to obtain permits, and landowner feedback.

Outreach Program
- Surveys of field meeting participants and stakeholder group members will assess changes in awareness and attitudes throughout the project period.

5b. Various entities are performing weed mapping, control, and monitoring programs along Cache Creek. The CCWSG and the Yolo County RCD are in regular contact and cooperation with all of them and intends to use their findings and resources as possible when undertaking weed control measures. Below is a bulleted listing of those efforts:
- The Yolo County Weed Management Area (YCWMA), organized in cooperation with the State Department of Food and Agriculture and of which the RCD is a signatory, has recently been funded to conduct invasive weed mapping, monitoring, and control activities in various locations throughout the County.
- The County of Yolo has recently embarked on a three-year mapping project of Tamarisk on Cache Creek using aerial photography. Flyovers each April (when Tamarisk is in bloom) will provide information on the impacts and spread of the weed along the creek.
- The Cache Creek Conservancy, covering the reach of Cache Creek below the Capay dam, is working in cooperation with the Salt-Cedar Consortium, a collaboration of a number of agencies in three western states, in the systematic reduction of populations of tamarisk and other specific invasives. Through this program the USDA ARS APHIS (Animal and Plant Health Inspection Service) is conducting a staged release of a bio-control agent for tamarisk along Cache Creek – one of only three sites in California.

- The Conservancy is a member of Team Arundo del Norte (TADN) in Arundo removal efforts and is conducting Tamarisk and Arundo removal activities on its 130 acre Nature Preserve and in lower Creek reaches through its base funding.
- The US Bureau of Land Management (BLM) is conducting limited Tamarisk removal activities in the upper reaches of the Cache Creek watershed, from the confluence of Cache Creek and Bear Creek to Highway 20.
- The American Land Conservancy is funding similar work from Highway 20 upstream into Bear Valley.
  With weed control in the far upper watershed, as well as the lower watershed, it is not only complementary, but critical to success, that similar coordinated activities occur in the central and largest portion of the watershed to tie together both ends.
- The U.S. Department of Interior, Division of Mines and Geology, is conducting water quality monitoring related to mercury levels in the Creek and tributaries.
- Yolo County Parks, which maintains park facilities within the watershed, is committed to cooperating with the CCWSG and the RCD in the development of an assessment and management plan of the Capay Valley Watershed.

5c. The RCD will encourage and train willing landowners to undertake their own monitoring program on the farms and within the watershed. The RCD recently published a manual entitled "Monitoring On Your Farm: A Guide to Tracking and Understanding the Resources and Wildlife on Your Land," which discusses soil, water, plant and animal resources suitable for monitoring by private landowners and outlines simple methods for conducting such monitoring. The USS FARMS program, through the USS Watershed Improvement Program mentioned previously, is conducting citizen (high school students) water quality monitoring in the Willow Slough Watershed of Yolo County as part of systematically scheduled field/monitoring days. They will be expanding and renaming the program in 2001 to include other watersheds, one of which will likely be Cache Creek. The new name will be "SLEWS" (Student and Landowner Education and Watershed Stewardship)

5d. Monitoring Protocols
Range Pond and Riparian pasture fencing and revegetation: Photo-monitoring will be conducted to document the establishment of fencing and the planting of native species. Duplicate pre- and post- project establishment water quality samples will be taken. One-liter grab samples will be taken according to laboratory specifications and analyzed for sediment and nutrient content and comparisons made to determine percent improvement in water quality. Pre-plant and post-establishment measurements of percent vegetative cover of weeds vs. native plants using randomly placed 1 ft^2 or 1 m^2 quadrats (minimum 10 quadrats per site) will be taken to determine degree of weed suppression and success of native plant establishment, with a goal of 70% cover of native species by project completion. Changes in wildlife populations related to pond protection and revegetation are difficult to measure due to subject mobility and multiple factors affecting populations. However, wildlife use of the pond vicinity pre- and post-establishment will be monitored through: bird surveys (Point counts, 2 times/year), nesting surveys (1 time/year), mammal track surveys and/or baited track stations (2 times/year), visual reptile/amphibian surveys (2 times/year), and sweep-net samples for insects (minimum 4 times/year, 5 samples per site, 10 sweeps per sample) and/or 1 week duration placement of yellow sticky cards (2 times/year).

Sediment Traps: USDA Natural Resource Conservation Service Total Station will be used to survey sediment trap contours immediately post-construction for total volume, with a duplicate survey completed annually to determine total volume of sediment captured. If excavation is required, surveys will be taken pre- and post-excavation. Water samples will be taken according to laboratory specifications during early, middle and late periods of individual irrigation events for a minimum of three irrigations. Samples will be taken at the entrance and exit of all sediment traps to determine degree of detention and capture of sediment and nutrients (and possibly other chemicals with additional funding).

Vegetated filter strips: Pre-plant and post-establishment measurements of plants per m^2 and percent vegetative cover of weeds vs. native plants will be taken using 1 ft^2 or 1 m^2 quadrats (minimum 10 quadrats per site) to determine degree of weed suppression, success of native plant establishment, and plant density, with a goal of 70% cover of native species by project completion. Water sampling at the base of filter strips is still problematic, and staff will work closely with other filter strip research to develop the most effective and appropriate technique per site. At each site, filter stripped fields will have a non-treated control section for reference.

Cover crops: Pre-plant and post-establishment measurements of percent vegetative cover will be taken using 1 m^2 quadrats (minimum 20 quadrats per site) to determine success of cover crop establishment.
Staff will measure runoff and sediment and nutrient content in runoff at the bottoms of cover cropped and control sections of each field during at least 3 winter storm events. The RCD is improving its technique using automated water samplers with V-notch weirs.

Streambank enhancement & revegetation: Photomonitoring sites will be established at all project locations to document project activities and progress, and to further extend information about management techniques to local landowners. Streambank integrity and habitat quality will be evaluated prior to revegetation and at project completion. Streambanks will be evaluated and monitored using a weighted category ranking system adapted to streambanks. Habitat quality will be evaluated using habitat evaluation criteria from U.S. Fish and Wildlife Service, California Department of Fish and Game and U.S. EPA.

5e. The monitoring data, after technical analysis, will be prepared in report format using tables, charts, graphs, and photographs as appropriate. Reports will clearly show the resource conditions before the project began, the condition at the completion of the project(s), and steps taken to arrive at those conditions. The change/improvement will be discussed in qualitative terms as well as quantitative terms, and provided to the local Stakeholders Group, the County Board of Supervisors, all partners, and at Field Meetings accessible to the general public to provide as clear a picture as possible of the degree of success and the potential for overall watershed improvement, given local support and collaboration.

6. Scientific Basis

6a. Assessment of watershed conditions:
USDA NRCS State Office staff has recently completed a "Cache Creek GPS Photo Inventory" consisting of 78 photographs taken between Camp Haswell in the north and the Rumsey Rancheria 16 miles to the south. The County of Yolo takes annual, color aerial photos of the Creek from Rumsey to the settling basin near the Yolo bypass in spring to track the status and movement of infestations of Tamarisk. Documents from the 1960's are retained by the County related to environmental and engineering assessment by the US Army Corp of Engineers and by the Dept. of Water Resources related to the Blue Ridge Dam site. The County of Yolo also takes periodic water quality samples at Capay.

Self-assessment by landowners and NRCS staff (watershed resident) on individual properties have identified numerous resource concerns affecting the health of the Capay Valley Watershed:

- Excessive erosion from rangelands due to poor road construction techniques, non-management of riparian area grazing, and failed ponds. This erosion threatens the properties themselves as well as those downstream by mobilizing large volumes of sediment that move into the creek, degrading water quality
- Winter-time erosion on lowlands from lack of winter ground cover delivers sediment to the creek with associated nutrients and agrochemicals
- Continued expansion of populations of non-native invasive weeds throughout the watershed that reduce wildlife habitat and range forage quality as well as cause dangerous stream diversions that result in costly losses of farmland and other property which in turn results in great volumes of soil carried downstream, worsening water quality.

These problems are common throughout Yolo County, but specific study remains to be completed in terms of mapping and recommending solutions, which will be completed in the Capay Valley Watershed Comprehensive Watershed Management Plan (proposed for separate funding).
The Central Valley Regional Water Quality Control Board monitoring project, "An Assessment of Ecological and Human Health Impacts of Mercury in the Bay Delta Watershed," is a CALFED directed action. This study has focused on concerns of elevated levels of mercury in Cache Creek as a result of natural mercury deposits and abandoned mercury and gold mines that cause more direct delivery of mercury to groundwater and waterways in the watershed. The study includes cooperation with USGS and UC Davis and also monitors temperature, pH, Total Soluble solids sediment, and aquatic biota.

6b. Previous assessments:
A previous RCD project conducted within the Willow Slough Watershed, entitled the "Total Resource Management Outreach Program," provided the opportunity for initial assessment of the potential benefits of the conservation measures proposed here. The observations and assessments listed in 6a above, coupled with the RCD's positive experience with these conservation measures in this neighboring watershed guided the development of the Capay Valley Watershed Improvement Program proposal. The ongoing Union School Slough Watershed Improvement Program, funded by CALFED, will monitor and define the potential beneficial changes more closely. Because the preponderance of land in the Capay Valley is held in private ownership, as it is in the Willow Slough Watershed, the assumptions and operating model from Willow Slough can be applied fairly there: 1) Private landowners must play a primary role in watershed conservation; 2) Large-scale solutions are neither reasonable nor feasible due to expense and landowner resistance to government intervention; 3) Small-scale projects are most effective in terms of cost, demonstration, and teaching; 4) Small-scale projects allow landowners to "self-start" in

the future, multiplying conservation throughout the watershed; 5) Many remedial, farmer-friendly techniques exist to address these resource concerns. The lacking ingredients are education and funding resources.

Accordingly, the underlying goals of the CVWIP are 1) to educate landowners in proper techniques and watershed stewardship; 2) orient them to cost-sharing and grant resources available; 3) educate them regarding the standard permitting process for stream work; 4) work with agency representatives to streamline that process, which can otherwise create an unnecessary hindrance to well-meaning conservation work; 5) develop and implement a comprehensive watershed management plan to guide long-term work in the watershed, and 6) to coordinate Cache Creek Watershed Stakeholders Group efforts with watershed and regional partners such as the Cache Creek Conservancy, Capay Valley Vision, the Capay Valley Water Users Association, the Bureau of Land Management, the American Land Conservancy (Craig Thompson) CALFED, and the Sacramento River Watershed Program

6c. Scientific assumptions:
The scientific assumptions behind the proposed work are:

- Fenced, vegetated hill ponds or riparian corridors provide multiple benefits (improved water quality, groundwater recharge, wildlife habitat, improved animal health, increased options for grazing management)
    - UC Studies have documented improvements in drinking water quality, and associated improvements in animal health
    - Ponds are widely promoted for recharge of groundwater and capture of overland and watershed stormflow
    - Wildlife use of conservation improvements is currently being monitored in many settings through the CALFED project area
- Vegetation holds soil in place (and soil should stay where it is);
    - Generally accepted, as evidenced by specifications for seedings or plantings in the vast majority of all land contour alteration projects
- Native vegetation provides greater multiple benefits than non-native vegetation;
    - Previous and ongoing UC studies have documented increases in numbers and variety of native and beneficial insects and in ratios of beneficials to crop pests
    - Certain non-native invasive plant species have been documented as providing reduced or non-existent habitat for wildlife species compared to native vegetation
- Significant water quality improvement can be gained by trapping or limiting the mobility of suspended sediment on rangeland and lowland agricultural sites to impact creek water quality

6d. Consistency with scientific assumptions and previous assessments:
The proposed actions were selected because they respond to the issues identified as concerns in the watershed with methods based on the above assumptions regarding relationships between soil, vegetation, and water as well as those between landowners, their properties, and other stakeholders.

6e. Baseline knowledge:
The RCD's experience working with landowners in the Willow Slough watershed who have used the described conservation practices, along with their feedback on the costs, installation procedures, utility and revegetation process, as well as the RCD's monitoring have provided the baseline knowledge for the management actions described.

7. CALFED Goals and Objectives

7a. Addressing CALFED objectives:
This proposal meets multiple stated CALFED objectives of coordination, collaboration, monitoring and assessment, education and outreach, and long-term sustainability through demonstration and education of techniques that individual landowners can implement to improve watershed health for their properties and those downstream. The Watershed Coordinator will be a regular participant in Stakeholder meetings and activities and will have primary responsibility for coordination of agency, organization, and stakeholder involvement in projects above, below and within the project watershed.

Monitoring and assessment methods used in neighboring watersheds will be applied to and refined for this watershed in order to assess condition and contribute to adaptations in the long-term management process. Outreach to landowners and education of landowners and other partners on the use of practical conservation techniques are a vital component of the project framework and critical to its success. The previously described CCWSG has a five-year history of commitment toward working together to meet common goals in the midst of differing needs. Given the landowners' dependence on the

health of the land and water for support of their families, a long-term commitment is not in doubt. Each of the specific projects that are integral to this proposal also address multiple CALFED goals of water supply and/or ecosystem and water quality. The successful demonstration of these projects to local landowners within the watershed is expected to result in broader, voluntary implementation of these same practices, multiplying the benefits over an extended period of years.

Fencing and revegetation of rangeland stockponds and riparian areas has a direct effect on water quality in the immediate system by preventing animals from fouling their drinking water supply. Wetland and upland vegetation in the immediate vicinity of the ponds will further improve water quality by absorption and filtration of nutrients in the water and filtering sheet-flow storm runoff before it enters the pond. Ponds are known to contribute to groundwater recharge, augmenting groundwater supply. The native grasses planted on the uplands adjacent to fenced ponds and streams will serve as a demonstration of the techniques for planting native bunchgrasses on broader expanses of rangeland. Root system differences in native bunchgrasses can allow greater infiltration of rainwater during storms, contributing to increased groundwater storage and slow/extended release into nearby riparian systems. This also reduces the "flash" nature of storm runoff, which could serve to protect downstream flood-prone areas and levees. These factors will contribute to improved riparian habitat with higher quality water and extended water releases into the system and its greater downstream tributaries. The fenced ponds and riparian pastures will further contribute to ecosystem quality by providing a diverse, upland/wetland native plant system for a variety of wildlife and insects.

Sediment traps, filter strips, and cover crops contribute to water and ecosystem quality and water supply in ways similar to some of those described above. Sediment traps installed where tailwater would otherwise drain directly into a stream will capture and retain sediment by slowing the water down, allowing sediment to settle out before the water moves into the waterway. Nutrients and agrochemicals attached to those soil sediment particles would likewise be held in the system. During retention, nutrients and other impurities can be metabolized by organisms in the water or can be broken down through photo-degradation. Filter strips, properly placed at the low end of an agricultural area, have the expressed purpose of filtering any water that passes through them. These are used extensively in the Midwest, where farmland is not typically laser-leveled as in California, to slow down runoff, drop out sediment, capture nutrients, and allow the breakdown of impurities. Filter strips comprised of native plant species (grasses as well as broadleafs) will accomplish this as well as provide cover for a variety of local wildlife. Cover crops, typically planted on an annual basis, and composed of non-native legume and grass mixes, provide ecosystem benefits in ways that allow flexibility within existing agricultural systems where permanent cover may not be desirable. The cover protects the soil surface from erosion, and, as the RCD and UC Cooperative Extension have documented, can capture and slow winter storm runoff, increasing infiltration (Temple, et al., 2000; Miyao & Robins, 1998,2000). It also provides cover and protection for small wildlife, beneficial insect habitat, a food source for foraging songbirds, waterfowl nesting sites, and improved soil health conditions. Because of root system mining of the soil profile and the addition of organic matter cover crops can contribute to increased irrigation efficiency by improving water penetration through the soil profile and keeping more of the applied water on site.

Streambank enhancement and revegetation addresses CALFED objectives of water supply and quality as well as ecosystem quality. The Cache Creek corridor is heavily overrun with non-native invasive plants, specifically *Tamarix parviflora* (Tamarisk) and *Arundo donax* (Arundo). The phenology and behavior of these plants within the Cache Creek ecosystem, as in other systems, has resulted in the near exclusion of native riparian species in many areas, reduction of riparian wildlife species, forced re-direction of the stream channel outside of its normal high water zones, and resulted in severe erosion of the streambanks in places, sometimes causing the loss of portions of orchards and the necessary relocation of farm buildings and homes. There would be direct ecosystem quality benefits from stream enhancement and revegetation coupled with the removal of the non-native invasives. These projects, in concert with the improvements in the upper watershed described earlier, would model a system with integrity and stability, that contributes in broadscale ways to the supply and quality of the water and habitat of not only the local watershed, but an important component of the Bay Delta system.

7b. Relationships between watershed processes and CALFED Goals & Objectives:
The collaboration and education processes which are integral to this proposal, and which include a minimum of three interwoven local stakeholder groups (CCWSG, the Capay Valley Water Users Association, and Capay Valley Vision) and numerous county, state, federal and private partners, will serve as an excellent example of the key components that must be cohesive in order to achieve watershed goals. The local stakeholders are intimately connected and familiar with the land and, since it is the source of their livelihood, have a vested interested in its healthy function. This commitment is already apparent from the four-year time investment in the development of a functioning Stakeholders Group. In spite of their diverse needs and interests, they have unified around issues of improving the watershed. The education process will involve landowner training in watershed process and function, demonstration of watershed improvement techniques, and ways of incorporating watershed management practices that are compatible with existing land uses into their daily lives. These stakeholders are the ideal example of an efficient and effective way to implement CALFED goals since they are already familiar with standard

methods and equipment and proposal projects involve techniques and management methods easily integrated into their standard practices. The education program will be focused on basic watershed functions and landowner roles in them. Selected demonstration projects will amplify the links with hands-on experience and obvious visual connections, all tied to CALFED goals.

7c. Environmental compliance:
The California Department of Fish and Game (CDFG) will serve as our lead agency for CEQA compliance on the projects that have potential impacts on streams, as they have with other recent streambank restoration projects in the county. Throughout the project, RCD staff will engage agency personnel in a process of exploring streamlined and programmatic permitting opportunities (likely tied to completion of the CWMP). For individual streambank projects, the RCD will follow a similar procedure to that of previous RCD and partner projects:

- Upon determination of project, preferably at least 6 months before intended start of work, develop project plan and Streambed Alteration Agreement (1600) application along with a fee of either $154 (project under $25,000) or $772 (project over $25,000 but under $500,000) to CDFG representative, Dale Watkins. CDFG has 30 days to process it.
- Simultaneously contact US ACOE field representative for CWA 404 Nationwide Permit (30-day turnaround) if the project work will extend below the ordinary high water line.
- This will trigger a CWA 401 review by the State Water Resources or Regional Water Quality Control Boards. This will require a $500 fee.
- Contract with CDFG to complete CEQA evaluation. If necessary, CDFG will send a biologist to issue a biological opinion regarding potential impacts to special status species. For this project, we will select sites to avoid such impacts. We expect a categorical exemption under Section 15304 of the CEQA Guidelines as a "Minor Alteration to the Land." This requires a $750 deposit without likely further charges.
- The USDA NRCS will be our lead agency for NEPA compliance since we will receive technical and possibly financial cost-share support from them and/or the US Fish & Wildlife Service Partners with Fish & Wildlife Program. Work with both groups is covered under a categorical exemption from NEPA.

Citations:

Colla, G., J.P. Mitchell, B.A. Joyce, L.M. Huyck, W.W. Wallender, S.R. Temple, T. C. Hsiao, and D.D. Poudel. 2000. Soil physical properties, tomato yield and quality in alternative cropping systems. Agronomy Journal 92:99-112.

Miyao, G. and P Robins, Winter cover crops before late season processing tomatoes for soil quality and production benefits, Fertilizer Research and Education Program Conference, proceedings, Fresno, Nov 17, 1998.

Miyao, G. and P Robins, Fall cover crops may improve tomato yields, Proceedings, Conservation Tillage 2000 Conference: Conservation tillage success stories from around the US, Feb 10-11, 2000, Five Points and Davis, CA, pages 77-82.

8. Additional Information

The work proposed here is intended to accompany the development of a Comprehensive Watershed Management Plan, for which we have applied for funding through the Proposition 13 RFP (and if unsuccessful, subsequent proposals will be submitted for 205j funds and Proposition 13 funds for the Fall cycle). Landowner buy-in is critical to the success of the Stakeholders Group and Capay Valley Vision's shared goals of improved watershed health. Landowners have expressed frustration with what they perceive as "a lot of talk and little action." In response, our strategy for the CVWIP is to develop a Comprehensive Watershed Management Plan (the framework for which we are developing under current funding in the form of the Capay Valley Integrated Resources Management Manual), while at the same time supporting on-going small-scale conservation demonstration and education projects to meet the landowners, desire for action. The intended result is to have a cohesive stakeholders group with educated and trained landowners ready when the plan is completed and ready for implementation in 2003 or 2004. The point of this section is to demonstrate how this proposal is part of a larger effort within the Cache Creek Watershed and how the watershed coordinator as funded by this proposal will serve to promote collaboration and partnership between that many community groups and local, state, and federal agencies involved.

The five year old Cache Creek Watershed Stakeholders Group (CCWSG) now has more than 500 members from throughout the watershed. In light of pre-existing watershed coordination efforts in the upper Cache Creek Watershed (by BLM) and in

the lower section of Cache Creek below the Capay bridge (by the Cache Creek Conservancy and gravel extraction companies), the group narrowed its focus to the remaining "unorganized" portion of the watershed—that of Capay Valley (from the mouth of Cache Canyon to the Capay Dam. While maintaining a Capay Valley focus, the CCWSG is committed to collaboration and coordination with neighboring and partner regional and watershed groups such as the Blue Ridge Partnership (through BLM), Capay Valley Vision, Capay Valley Water Users Association (CVWUA) and the Cache Creek Conservancy (CCC—"downstream"). This collaboration is evident in the shared leadership and goals of the latter three groups and the CCWSG as well as recent financial support provided by the CCC to maintain Stakeholder Group meetings during a brief lapse in funding.

Through various funding sources the CCWSG retained consultant watershed coordinators, developed a charter (2000), undertook two native revegetation demonstration projects on Cache Creek, and initiated the development of an "Integrated Resource Management Manual" (Manual) for the watershed. The Manual will serve as a framework for the development of a Comprehensive Watershed Management Plan for Capay Valley (CWMP--under separate funding) and as a guide for the demonstration and education projects to be implemented through this proposal. The Manual is being modeled after the *Napa River Watershed Owners Manual* (1994) and the Willow Slough Watershed Management Plan. The local landowner members of the group are now extremely eager to move forward with additional restoration projects, completion of the Manual, the development of a CWMP and associated development of a programmatic permit for stream restoration work.

A second community-based group, the recently formed non-profit Capay Valley Vision, is currently seeking funding to develop a Community Action Plan for the Esparto-Capay Valley Area. CVV's efforts support the development of a Comprehensive Watershed Management Plan for Capay Valley. The Community Action Plan will provide a vision and action plan that will protect the watershed's farm and range lands and conserve natural resources while developing a sustainable economic strategy for the area. By combining the efforts of this proposal, the soon to be completed Integrated Resource Management Plan, and CVV's Community Action Plan, community support for the Comprehensive Watershed Management Plan will be well directed and cohesive.

Tamarisk removal throughout the watershed is a major issue. In addition to an already completed 16-acre demonstration site, the Cache Creek Conservancy is partnering with several local, state and federal agencies to implement a $1.7 million Tamarisk and Arundo maintenance and native revegetation project in lower Cache Creek. Similarly, the BLM is currently seeking funding to remove Tamarisk and reestablish native vegetation in the upper Cache Creek Watershed. The success of these projects will be strongly affected by similar actions taken in Capay Valley. Currently, many landowners in Capay Valley are concerned about the negative impacts associated with the removal of Tamarisk in Cache Creek. This proposal will provide a link between concerned landowners and the successful techniques that have been implemented and being tested by the Cache Creek Conservancy. These techniques will be included in the Integrated Resource Management Manual and the Comprehensive Watershed Management Plan.

YOLO COUNTY RCD CAPAY VALLEY CALFED WATERSHED PROGRAM BUDGET AND PROJECT SUMMARY

	Task Description	Completion date	Match funds	CALFED funds	Total
Task 1:	Administration:	Jan-05	$ 5,606.00	$ 88,408.10	$ 94,014.10
Task 1a:	project oversight, grant-writing, record keeping, meeting setup, and contract compliance; personnel management, monthly board meeting reports and attendance, compliance with annual audit.				
Task 1b:	staff meeting participation, professional development				$ -
Task 1c:	participation in general RCD outreach programs: Annual Dinner, County Fair Booth preparation, and outreach materials generation or modification-- Bring Farm Edges Back to Life!, Monitoring on Your Farm, Know Your Natives, RCD Projects Brochure, and RCD Website				$ -
	Task Product(s): *Project staffed, project and budget administered successfully, RCD inter-project collaboration, project part of RCD outreach program and materials.*				
	Success Criteria: *Staff satisfied with work, RCD Board satisfied with project reporting and progress, project significant contributor to RCD conservation outreach efforts*				
Task 2:	Demonstration Projects and Project Permitting	May-04	$ 129,550.00	$ 254,828.20	$ 384,378.20
Task 2a:	rangeland projects				
Task 2b:	farmland projects				
Task 2c:	streambank projects				
Task 2d:	Streamlined permitting process exploration and development				
	Task Product(s)*: 2.1--1/2 mile of riparian fencing, 2 fenced ponds; 2.2--100 acres of cover crop, 5 acres of filter strip, xx sediment traps constructed; 2.3--two streambank stabilization and revegetation projects completed with appropriate permit process; 2.4--streamlined permit process developed for watershed.*				
	Success Criteria: *Projects completed, vegetation established, weeds suppressed, banks stabilized, water quality improved--per monitoring in task 3*				
Task 3:	Monitoring and maintenance	Nov-04	$ 257,550.00	$ 142,787.70	$ 400,337.70
Task 3a:	develop monitoring protocol for project sites			$ -	
Task 3b:	collect data from project sites regarding project success and impact			$ -	
Task 3c:	Tabulate and analyze data for presentation and reporting			$ -	
	Task Product(s): *Monitoring protocol developed for demonstration projects; data collected and analyzed regarding project success and impact*				
	Success Criteria: *adequate data gathered for assessment of techniques' benefits and appropriateness*				
Task 4:	Watershed Outreach and coordination	Dec-04	$ 56,468.00	$ 118,122.40	$ 174,590.40
Task 4a:	Hold two field meetings per year in watershed and coordinate with two additional within county with other programs				
Task 4b:	Collaboration with other neighboring watershed groups and CRMPs				
Task 4c:	Participation in regional watershed programs and activities--CALFED, SWRP, Yolo WRA…				
Task 4d:	Coordinate stakeholders meetings and steering committee meetings (each every 6 weeks)				
	Task Product(s): *Four workshops per year held, Regular participation in regional and CALFED watershed groups, Collaboration with upstream and downstream watershed groups, Regular Stakeholders group meetings*				
	Success Criteria: *20-40 people in region attending field meetings, surveys indicating growing interest or understanding of watershed functions and conservation, joint proposals or activities developed with other watershed groups, increased cohesiveness and activity of Stakeholders group*				
Task 5:	Reporting and Presentations	Feb-05	$ 1,466.00	$ 42,975.90	$ 44,441.90
Task 5a:	Quarterly progress reports: Progress reports on project implementation, including financial status, milestones reached, products completed, and general assessment of overall progress, including problems encountered or anticipated.				
Task 5b:	Draft final report: Draft report summarizing the project implementation, achievements, product deliveries, financial status. To be sent to the Contract Manager for review and comment.				
Task 5c:	Final report: Revised report incorporating comments from the Contract Manager and others.				
Task 5d:	Presentations: Delivering at least one final summary presentation to CALFED.				
	Task Product(s): *reports on schedule and project implemented within budget.*				
	Success Criteria:				

Task Description	Labor Rate (+25% Benefits)	Hours	Total Labor	Supplies	Travel	Other Expenses	Sub-contract**	Overhead (10%)	Match	CALFED	Total
Task 1: Adminstration			$ 45,621.00	$ 10,000.00	$23,250.00		$ 1,500.00	$ 8,037.10	$ 5,606.00	$ 88,408.10	$ 94,014.10
Watershed Coordinator	$20.00	555	$ 13,875.00						$ 1,466.00		
Restoration Specialist	$20.00	624	$ 15,600.00								
RCD Executive Director	$27.00	374.4	$ 12,636.00								
RCD Program Assistant	$15.00	187.2	$ 3,510.00								
NRCS Vehicle Use									$ 4,140.00		
Task 2: Watershed Demonstration Projects & Permitting			$ 98,019.00	$ 79,143.00	$ 1,000.00	$ 6,000.00	$47,500.00	$23,166.20	$ 129,550.00	$ 254,828.20	$ 384,378.20
Watershed Coordinator	$20.00	1665	$ 41,625.00						$ 4,398.00		
Restoration Specialist	$20.00	1872	$ 46,800.00								
RCD Executive Director	$27.00	249.6	$ 8,424.00								
RCD Program Assistant	$15.00	62.4	$ 1,170.00								
Capay Valley Stakeholders + Agency Reps	$60.00	600							$ 36,000.00		
NRCS Staff Time									$ 89,152.00		
Task 3: Site Monitoring & Maintenance			$ 93,807.00	$ 15,000.00	$ 1,000.00		$20,000.00	$12,980.70	$ 257,550.00	$ 142,787.70	$ 400,337.70
Watershed Coordinator	$20.00	1665	$ 41,625.00						$ 4,398.00		
Restoration Specialist	$20.00	1872	$ 46,800.00								
RCD Executive Director	$27.00	124.8	$ 4,212.00								
RCD Program Assistant	$15.00	62.4	$ 1,170.00								
Capay Valley Stakeholders + Agency Reps	$60.00	300							$ 18,000.00		
NRCS Staff Time									$ 89,152.00		
Yolo County Creek Mapping Project									$ 146,000.00		
Task 4: Outreach & Watershed Coordination			$ 70,884.00	$ 12,250.00	$ 3,000.00	$21,250.00		$10,738.40	$ 56,468.00	$ 118,122.40	$ 174,590.40
Watershed Coordinator	$20.00	1110	$ 27,750.00						$ 2,392.00		
Restoration Specialist	$20.00	1248	$ 31,200.00								
RCD Executive Director	$27.00	249.6	$ 8,424.00								
RCD Program Assistant	$15.00	187.2	$ 3,510.00								
Capay Valley Stakeholders + Agency Reps	$60.00	100							$ 6,000.00		
NRCS Staff Time									$ 44,576.00		
Field Meetings									$ 3,500.00		
Task 5: Reporting and presentations			$ 39,069.00					$ 3,906.90	$ 1,466.00	$ 42,975.90	$ 44,441.90
Watershed Coordinator	$20.00	555	$ 13,875.00						$ 1,466.00		
Restoration Specialist	$20.00	624	$ 15,600.00								
RCD Executive Director	$27.00	249.6	$ 8,424.00								
RCD Program Assistant	$15.00	62.4	$ 1,170.00								
3 Year Total Budget:			$347,400.00	$ 116,393.00	$28,250.00	$27,250.00	$69,000.00	$58,829.30	$ 450,640.00	$ 647,122.30	$ 1,097,762.30
Average Annual Budget:			$115,800.00	$ 38,797.67	$ 9,416.67	$ 9,083.33	$23,000.00	$19,609.77	$ 150,213.33	$ 215,707.43	$ 365,920.77

*25% fringe benefits additional to stated labor rate

**See separate itemized budget for subcontracts

Subcontract	Equipment time	Labor	Supplies	Lab work	Match	CALFED	Total
Road grading & culverts installed	$ 5,000.00					$ 5,000.00	$ 5,000.00
Planting & Weed control		$ 5,000.00				$ 5,000.00	$ 5,000.00
Sediment Trap excavation and drop structure placement	$ 1,500.00					$ 1,500.00	$ 1,500.00
Fence building		$ 7,200.00	$ 10,800.00			$ 18,000.00	$ 18,000.00
Excavation and material placement for stream projects	$ 18,000.00					$ 18,000.00	$ 18,000.00
Lab analysis of water samples				$ 20,000.00		$ 20,000.00	$ 20,000.00
Totals:	**$ 24,500.00**	**$ 12,200.00**	**$ 10,800.00**	**$ 20,000.00**	**$ -**	**$ 67,500.00**	**$ 67,500.00**